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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,671	06/21/2006	Yuichiro Shindo	OGOSH55USA	9231

  

270	7590	03/25/2011
HOWSON & HOWSON LLP 501 OFFICE CENTER DRIVE SUITE 210 FORT WASHINGTON, PA 19034		

  

EXAMINER	
ROE, JESSEE RANDALL	

  

ART UNIT	PAPER NUMBER
1733	

  

NOTIFICATION DATE	DELIVERY MODE
03/25/2011	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@howsonandhowson.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/596,671	<b>Applicant(s)</b> SHINDO, YUICHIRO	
	<b>Examiner</b> JESSEE ROE	<b>Art Unit</b> 1733	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2011.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1, 7 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 7 and 14-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Status of the Claims***

Claims 1, 7 and 14-17 are pending wherein claims 1 and 7 are amended, claims 14-17 are new and claims 2-4 and 8-13 are canceled.

### ***Status of Previous Objections***

The previous objection to the disclosure withdrawn in view of Applicant's submission of a new abstract on 18 March 2011.

### ***Status of Previous Rejections***

The previous rejection of claims 1 and 7 under 35 U.S.C. 102(b) as being anticipated by Chi et al. (US 6,531,396) is withdrawn in view of the Applicant's amendment to claims 1 and 7.

### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 7, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chi et al. (US 6,531,396).

In regards to claims 1 and 7, Chi et al. ('396) discloses depositing a nickel/platinum layer on a semiconductor substrate from a sputtering target wherein the nickel/platinum layer (and therefore the sputtering target) has a nickel content between

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90 and 99% and a platinum content between 1 and 10% (col. 2). Thus, it would have been obvious to one of ordinary skill in the art to select a sputtering target having nickel within the range of 90 to 99% and platinum within the range of 1 to 10%, which is *prima facie* evidence of obviousness. MPEP 2144.05 I.

With respect to the recitation "having a purity of 99.99% or higher" in line 2 of claims 1 and 7, Chi et al. ('396) discloses either using a nickel-platinum alloy target or co-sputtering a pure nickel target and a pure platinum target (cols. 1 and 2). Chi et al. ('396), therefore desires only depositing pure materials on the semiconductors. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to only use pure metals in the sputtering targets that would be used in the semiconductors of Chi et al. ('396). Alternatively, Chi et al. ('396) does not specify that the Ni-Pt alloy would have "a purity of 99.99% or higher" as in claims 2 and 8. However, merely purifying a prior art product would not be sufficient to patentably distinguish from that prior art product. MPEP 2144.04 (VII).

With respect to the recitation "wherein said Ni-Pt alloy target has a melted, cast and rolled target structure" in claim 14, the Examiner notes that the claims are drawn to a product and not a melt, cast and rolling process. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. MPEP 2113.

With respect to the recitation "and is without cracks and fracture" in claim 14, the Examiner notes that Chi et al. ('396) does not require the Ni-Pt alloy have cracks and be

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fractured. Therefore, an alloy without cracks and fracture would be expected in Chi et al. ('396).

With respect to the recitation "wherein said Ni-Pt ally is melted and cast ingot rollable without formation of cracks and fractures" in claim 16, the Examiner notes that the claims are drawn to a product and not a melt, cast and rolling process. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. MPEP 2113. Additionally, the Examiner notes that "rollable without formation of cracks and fractures", the Examiner notes that this recitation does not limit the claim scope since it suggests or makes optional, but does not require the step(s) be performed. MPEP 2111.04.

Claims 1, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vilensky (US 2,269,497).

In regards to claims 1 and 17, Vilensky ('497) discloses a nickel-platinum alloy having 0.5 to 25 weight percent platinum and 75 to 99.5 weight percent nickel (page 1, left column, lines 55-61). The Examiner notes that the amount of platinum in the nickel alloy of Vilensky ('497) overlaps the amount of platinum in the instant invention, which is *prima facie* evidence of obviousness. MPEP 2144.05 I. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected the claimed amount of platinum from the amount disclosed by Vilensky ('497) because Vilensky ('497) discloses the same utility throughout the disclosed ranges.

With respect to the recitation "having a Vickers hardness of 40 to 90" in lines 2-3 of claim 1, the Examiner notes that because Vilensky ('497) discloses a substantially similar composition, this property would be expected. MPEP 2112.01 I.

With respect to the recitations "superior in workability" in line 1 of claim 1 and "having a purity of 99.99% or higher" in line 2 of claim 1, Vilensky ('497) discloses that the alloy that the alloy may be readily worked (pg. 1, left column, lines 37-39 and pg. 2, left column, lines 9-20) and although Vilensky ('497) does not specify the purity of the platinum or the nickel, merely purifying a prior art product would not be sufficient to patentably distinguish from that prior art product. MPEP 2144.04 (VII).

With respect to the recitation "melted and cast ingot rollable without the formation of cracks and fracture" in claim 16, the Examiner notes that this recitation does not limit the claim scope since it suggests or makes optional, but does not require the step(s) be performed. MPEP 2111.04. Additionally, the Examiner notes that Vilensky ('497) teaches melting the alloy and rolling (page 1, left and right columns) and does not indicate the formation of cracks and fracture and therefore meets the claim.

Claims 1, 7 and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kinoshita et al. (US 5,282,946).

In regards to claims 1, 7, 15 and 17, Kinoshita et al. ('946) discloses a nickel-platinum sputtering target containing 10 to 55 weight percent platinum (abstract and cols. 1-2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to select the claimed amount of platinum from the amount

disclosed by Kinoshita et al. ('946) because Kinoshita et al. ('946) discloses the same utility throughout the disclosed range.

With respect to the recitations "superior in workability" in line 1 of claims 1 and 7 and "having a Vickers hardness of 40 to 90" in lines 2-3 of claims 1 and 7, the Examiner notes that "superior workability" and this Vickers hardness would be expected in the alloy of Kinoshita et al. ('946) since Kinoshita et al. ('946) discloses substantially similar platinum content. MPEP 2112.01 I.

With respect to the recitation "having a purity of 99.99% or higher" in line 2 of claims 1 and 7, although Kinoshita et al. ('946) does not specify the purity of the platinum or the nickel, merely purifying a prior art product would not be sufficient to patentably distinguish from that prior art product. MPEP 2144.04 (VII).

With respect to the recitation "wherein said Ni-Pt alloy target has a melted, cast and rolled target structure and is without cracks and fractures" in claim 14 and "wherein said Ni-Pt alloy is a melted and cast ingot rollable without formation of cracks and fractures" in claim 16, Kinoshita et al. ('946) teaches melting (col. 2), casting (col. 2), and rolling (cols. 4 and 5). Kinoshita et al. ('946) also teaches that the alloy can be rolled without causing any cracking or chipping (fractures) (col. 5).

### ***Response to Arguments***

Applicant's arguments filed 18 March 2011 have been fully considered but they are not persuasive.

First, the Applicant primarily argues that the Examiner has misinterpreted the proper context of the word "pure" as intended by Chi et al. ('396) since the context of "pure" is that the nickel target is made of nickel, not an alloy, and that the platinum target is made of platinum, not an alloy and one having ordinary skill in the art is aware that, in a "co-sputtering" operation, separate targets of different "pure" materials are sputtered simultaneously to form an alloy thin film as opposed to using an alloy target to form the alloy film and here "pure" refers to a simple metal nickel target or a simple metal platinum target and not a target made from a Ni-Pt alloy. Additionally, the Applicant argues that the word "pure" as used by Chi et al. ('396) states nothing with respect to the purity of the targets or the content of impurities of the targets and Applicant request removal of at least this portion of the obviousness rejection because Chi et al. ('396) does not refer to the purity (or content of impurities) of the target.

In response, Chi et al. ('396) discloses either using a nickel-platinum alloy target or co-sputtering a pure nickel target and a pure platinum target (cols. 1 and 2). Chi et al. ('396), therefore desires only depositing pure materials on the semiconductors. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to only use pure metals in the sputtering targets that would be used in the semiconductors of Chi et al. ('396). Alternatively, Chi et al. ('396) does not specify that the Ni-Pt alloy would have "a purity of 99.99% or higher" as in claims 2 and 8. However, merely purifying a prior art product would not be sufficient to patentably distinguish from that prior art product. MPEP 2144.04 (VII). Additionally, the Examiner asserts that "pure" means free from other materials unless a degree is provided. Since



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Chi et al. ('396) do not provide the degree for "pure", one skilled in the art would interpret this as indicating 100% purity.

Second, the Applicant primarily argues that one of ordinary skill in the art was aware that Ni-Pt alloy targets are brittle and extremely hard having Vickers hardness too high for rolling, this was believed irrespective of purity, and one having ordinary skill in the art would have prepared Ni-Pt targets in a manner not requiring rolling or plastic working (sintering powders) and not requiring Vickers hardness to be reduced to the levels recited in the claims of the present application.

In response, the Examiner notes that the claims are drawn to a product and not a process and although Applicant argues that a lower purity would not allow rolling or plastic working, Applicant has not provided Figures showing how a rolled nickel-platinum alloy having the claimed purity would have a different structure than a nickel-platinum alloy having the same claimed purity that would be made by sintering powders or how the purity is critical to the claimed hardness commensurate in scope with the pending claims.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessee Roe whose telephone number is (571)272-5938. The examiner can normally be reached on Monday-Thursday and alternate Fridays 7:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy V. King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Roy King/  
Supervisory Patent Examiner, Art  
Unit 1733

/JR/